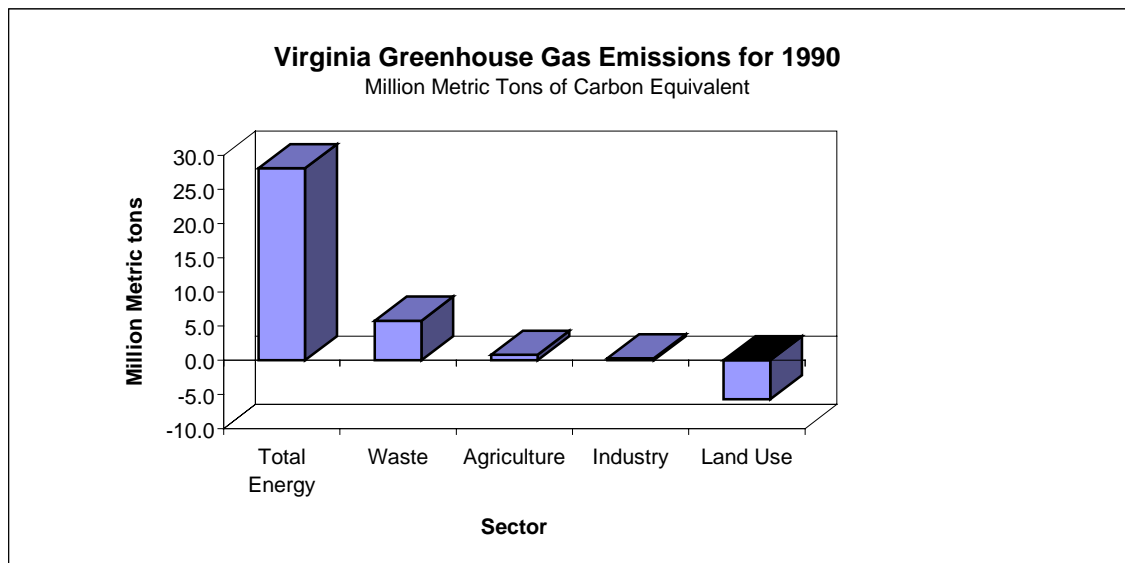


VIRGINIA GREENHOUSE GAS EMISSIONS AND SINKS INVENTORY: SUMMARY



The report “*State Greenhouse Gas Emission Inventory for the Commonwealth of Virginia*” provides a detailed inventory of greenhouse gas emissions and sinks for Virginia in 1990. Emissions were estimated using methods from EPA’s 1995 guidance document ***State Workbook: Methodologies for Estimating Greenhouse Gas Emissions***. In 1990, Virginia emitted 29.2 million metric tons of carbon equivalent (MMTCE). Virginia estimated emissions of more than 5.1 MMTCE from biomass fuels.¹ Emissions from these sources are not included in the reported total or the table below.

The principal greenhouse gases were carbon dioxide, comprising 76.7 million metric tons (20.9 MMTCE), and methane, with 1.4 million metric tons (8.3 MMTCE). Other emissions included 0.0002 million metric tons of nitrous oxide (0.02 MMTCE).

The major source of carbon dioxide emissions was fossil fuel combustion (99%). Carbon dioxide sinks (i.e., an increase in forest carbon storage) offset about 16% of the total carbon dioxide emissions. Contributors to methane emissions were landfills (70%), coal mining (21%), manure management (5%), and domesticated animals (4%). Nearly all nitrous oxide emissions were accounted for by fertilizer use (93%), with minor emissions from agricultural burning.

Virginia emissions in 1990 were 4.7 MTCE per capita, compared to 1990 U.S. emissions of 6.4 MTCE per capita.

¹ In addition, the Virginia inventory estimates emissions of carbon monoxide and nitrogen oxides, which are greenhouse gases for which global warming potentials have not yet been developed.

Virginia Greenhouse Gas Emissions for 1990

SECTOR	CO ₂ (MMTCE)	Methane (MMTCE)	Nitrous Oxide (MMTCE)	PFCs (MMTCE)	Total GHG Emissions (MMTCE)
Energy - Residential	2.0	*	*	*	2.0
Energy - Commercial	1.1	*	*	*	1.1
Energy - Industrial	6.4	*	*	*	6.4
Energy - Transport	11.2	*	*	*	11.2
Energy - Utility	5.7	*	*	*	5.7
Total Energy	26.4	1.7	*	*	28.1
Waste	*	5.8	*	*	5.8
Agriculture	*	0.8	0.0	*	0.8
Industry	0.3	*	*	*	0.3
Land Use	-5.7	*	*	*	-5.7
Total	20.9	8.3	0.02	*	29.2

All emissions are reported in million metric tons of carbon equivalent (MMTCE).

An asterisk (*) indicates that emissions of the gas from this sector were zero, insignificant, or not reported.

Emissions due to coal mining and extraction of natural gas and oil are included in the total energy figures, and emissions from biofuel combustion are excluded.